

REMARKS

In the Official Action mailed on **January 26, 2005** the Examiner reviewed Claims 1-21. Claims 1-21 were rejected under 35 U.S.C. §102(b) as being anticipated by Santhanam (USPN 5,704,053, hereinafter “Santhanam”).

Rejections under 35 U.S.C. §102(b)

Independent claims 1, 8, and 15 were rejected as being anticipated by Santhanam. Applicant respectfully points out that Santhanam teaches **not executing** redundant prefetch instructions for a given data reference (see Santhanam, col. 7, lines 1-8).

In contrast, the present invention inserts multiple redundant prefetch instructions for a given data reference into unused instruction slots, and **executes the multiple redundant prefetch instructions** to potentially avoid a cache miss (see page 15, lines 15-21 of the instant application). This is beneficial because the cost of a cache miss is significantly greater than the cost of the multiple redundant prefetch instructions, particularly if the multiple redundant prefetch instructions are placed into unused instruction slots. In fact, Santhanam teaches away from executing multiple redundant prefetch instructions (see Santhanam, col. 7, lines 2-4). There is nothing within Santhanam, either explicit or implicit, which suggests inserting multiple redundant prefetch instructions for a given data reference into unused instruction slots, and executing the multiple redundant prefetch instructions to potentially avoid a cache miss.

Accordingly, Applicant has amended independent claims 1, 8, and 15 to clarify that the present invention inserts multiple redundant prefetch instructions for a given data reference into unused instruction slots, and executes the multiple redundant prefetch instructions to potentially avoid a cache miss. These amendments find support on page 15, lines 15-21 of the instant application.

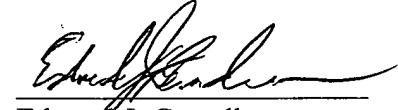
Hence, Applicant respectfully submits that independent claims 1, 8, and 15 as presently amended are in condition for allowance. Applicant also submits that claims 2-7, which depend upon claim 1, claims 9-14, which depend upon claim 8, and claims 16-21, which depend upon claim 15, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

By


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